

REMARKS

Claims 14 – 26 remain in this application. Claims 14 – 17 are withdrawn from consideration. Claim 18 has been amended. Reconsideration of this application in view of the amendments noted is respectfully requested.

The disclosure was objected to because of the informality that the beginning of the specification should specify that the application is a U.S. national stage entry of the international application. Accordingly, a cross reference to related application section has been added to the specification after the title of invention.

Claims 18, 20, and 21 were rejected under Section 103(a) as being unpatentable over Glass et al. (U.S. Patent No. 5,120,421, hereinafter “Glass”) in view of Liu (U.S. Patent No. 4,655,880). Applicant respectfully traverses this rejection. Glass discloses a sensor having many series of electrodes. The sensor (e.g., Fig. 12), however, is a micro array. For example, the embodiment of Fig. 12 is a 4 x 4 mm silicon wafer having 77,000 electrodes. This type of micro array would suffer from a lot of disturbance from fibers and dirt in process liquids.

The present invention, as claimed in amended claim 18, is a sensor including a measurement cell in which there are electrodes. As now found in claim 18, all electrodes of the sensor are mechanically discrete and each electrode is in a channel. The present invention utilizes discrete electrodes in a channel while Glass uses a micro array of electrodes which are not in a channel. The structure of the present invention is different than the micro array of Glass and is necessary in order to achieve stable measuring. Neither Glass nor Liu teach or suggest such an electrode arrangement.

For these reasons, claim 18 is patentable over Glass and Liu, and any combination thereof. Claims 20 and 21, depending directly from claim 18, are therefore also patentable over Glass and Liu, and any combination of these references. Therefore, applicant respectfully requests that the Section 103(a) rejection of claims 18, 20, and 21 over Glass in view of Liu be withdrawn.

Claims 18, 20, and 21 were rejected under Section 103(a) as being unpatentable over Winqvist et al. (Meas. Sci. Technol., 9, pp. 1937-1946, 1998, hereinafter "Winqvist") in view of Liu. Applicant respectfully traverses this rejection. Winqvist discloses a sensor having five working electrodes, one reference electrode, and one auxiliary electrode. Neither Winqvist nor Liu teach or suggest that the electrodes are in a channel as claimed in amended claim 18. Since the electrodes of the present invention are in a channel, the flow of liquid by the electrodes keeps the electrodes clean. Neither Winqvist nor Liu teach this structure and they are silent regarding the fouling of electrodes. Therefore, neither Winqvist nor Liu teach or suggest the present electrode arrangement.

For these reasons, claim 18 is patentable over Winqvist and Liu, and any combination thereof. Claims 20 and 21, depending directly from claim 18, are therefore also patentable over Winqvist and Liu, and any combination of these references. Therefore, applicant respectfully requests that the Section 103(a) rejection of claims 18, 20, and 21 over Winqvist in view of Liu be withdrawn.

Claim 21 was rejected in the alternative under Section 103(a) as being unpatentable over either Glass or Winqvist in view of Liu as applied to claim 18 above, and further in view of Toxic Gas Citicels (hereinafter "Citicels"). Applicant respectfully traverses this rejection. Applicant incorporates by reference the arguments made above with respect to Glass, Winqvist, and Liu. Based upon these arguments, claim 18 is patentable over Glass, Winqvist, and Liu, and any combination of these references. Claim 21, depending directly from claim 18, is therefore allowable over Glass or Winqvist in view of Liu, and any further combination of these references with Citicels. Therefore, applicant respectfully requests that the Section 103(a) rejection of claim 21 over either Glass or Winqvist in view of Liu as applied to claim 18 above, in further view of Citicels be withdrawn.

Claim 24 was rejected under Section 103(a) as being unpatentable over either Glass or Winqvist in view of Liu as applied to claim 18 above, and further in view of Goerg et al. (U.S. Patent No. 3,616,272, hereinafter "Goerg"). Applicant respectfully traverses this rejection. Applicant incorporates by reference the arguments made with respect to Glass,

Winqvist, and Liu above. Based upon these arguments, claim 18 is patentable over Glass, Winqvist, and Liu, and any combination of these references. Thus claim 24, depending directly from claim 18, is allowable over any combination of Glass, Winqvist, and Liu, and any further combination of these references with Goerg. Therefore, applicant respectfully requests that the Section 103(a) rejection of claim 24 over either Glass or Winqvist in view of Liu as applied to claim 18 above, in further view of Goerg be withdrawn.

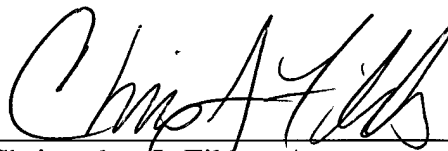
Claims 19, 22, 23, 25, and 26, depending from an allowable base claim, are also allowable.

This amendment is believed to be fully responsive to the comments and suggestions of the examiner and to place this application in condition for allowance. Further, this amendment should be entered as it places the application in condition for allowance or in better form for appeal. No further search or consideration is required. Favorable action is requested.

Respectfully submitted,

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Fildes & Outland, P.C.

A handwritten signature in black ink, appearing to read "Chris Fildes", written over a horizontal line.

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